In the claims:

1. (Currently Amended) A magnetic resonance imaging system comprising:

at least one superconducting magnet generating a static magnetic field;

a gradient coil assembly with an associated patient bore enclosure comprising;

at least one gradient shield coil ~~generating at least one gradient magnetic field~~; and

at least one static field-shaping coil residing between said at least one gradient shield coil and said patient bore enclosure and supplementing said static magnetic field.

2. (Original) A system as in claim 1 wherein said at least one superconducting magnet resides within a cryostat having at least one thermal shield, said at least one static field-shaping coil resides between said at least one thermal shield and said patient bore enclosure.

3. (Currently Amended) A system as in claim 1 wherein ~~further comprising~~ said at least one gradient shield coil compensating for pulse sequences generated within the magnetic resonance imaging system.

4. (Currently Amended) A system as in claim [[3]]1 wherein said at least one gradient shield coil resides between said at least one superconducting magnet and ~~said gradient coil assembly~~ said at least one static field-shaping coil.

5. (Currently Amended) A system as in claim [[3]]1 wherein said at least one static field-shaping coil resides between said at least one gradient shield coil and ~~said patient bore enclosure~~ at least one gradient coil.

6. (Original) A system as in claim [[3]]1 wherein said gradient coil assembly comprises said at least one gradient shield coil.

7. (Original) A system as in claim 1 further comprising a static field-shaping coil housing residing within a magnet structure of the magnetic resonance imaging system, said at least one static field-shaping coil residing within said static field-shaping coil housing.

8. (Original) A system as in claim 7 wherein said static field-shaping coil housing is formed of a material that prevents induction of eddy currents therein.

9. (Original) A system as in claim 7 wherein said static field-shaping coil housing is formed of a composite material.

10. (Original) A system as in claim 7 wherein said static field-shaping coil housing comprises a coolant.

11. (Original) A system as in claim 10 wherein said coolant is cooled via a cryocooler.

12. (Original) A system as in claim 1 wherein the magnetic resonance imaging system is of a cylindrical or open architecture design.

13. (Original) A system as in claim 1 wherein said at least one superconducting magnet comprises at least one low temperature superconductor.

14. (Original) A system as in claim 1 wherein said at least one superconducting magnet comprises at least one high temperature superconductor.

15. (Original) A system as in claim 1 wherein said at least one static field-shaping coil comprises at least one low temperature superconductor.

16. (Original) A system as in claim 1 wherein said at least one static field-shaping coil comprises at least one high temperature superconductor.

17. (Original) A system as in claim 1 wherein said at least one static field-shaping coil is unshielded from said at least one gradient magnetic field.

18. (Original) A system as in claim 1 wherein said at least one static field-shaping coil is inductively isolated from said at least one gradient coil assembly.

19. (Original) A system as in claim 1 wherein said at least one static field-shaping coil is cooled using at least one of a cryogen bath, conduction, or convection.

20. (Original) A system as in claim 1 wherein said at least one static field-shaping coil is cooled via a coolant selected from at least one of helium, nitrogen, hydrogen, or neon.

21. (Original) A system as in claim 1 wherein said at least one static field-shaping coil is approximately a factor of ten smaller than said at least one superconducting magnet.

22. (Original) A system as in claim 1 wherein at least one of said at least one static field-shaping coil is replaced with an iron ring.

23. (Original) A system as in claim 1 wherein said at least one superconducting magnet resides at least partially within a first former and said at least one static field-shaping coil resides at least partially within a second former.

24. (Currently Amended) A magnetic resonance imaging system comprising:

at least one superconducting magnet generating a static magnetic field;

~~at least one gradient shield coil compensating for pulse sequences generated within the magnetic resonance imaging system~~;

a gradient coil assembly with an associated patient bore enclosure comprising;

at least one gradient coil generating at least one gradient magnetic field; and

at least one ~~supplemental~~ static field-shaping coil residing within ~~between~~ said ~~at least one~~ gradient coil assembly ~~and said patient bore enclosure~~ and increasing strength of said static magnetic field.

25. (Currently Amended) A system as in claim 24 further comprising ~~wherein said~~ at least one gradient shield coil ~~resides~~ residing between said at least one superconducting magnet and said ~~gradient coil assembly~~ patient bore enclosure.

26. (Currently Amended) A magnetic resonance imaging system comprising:

at least one superconducting magnet generating a static magnetic field;

at least one gradient shield coil compensating for pulse sequences generated within the magnetic resonance imaging system;

a gradient coil assembly with an associated patient bore enclosure comprising;

at least one gradient coil generating at least one gradient magnetic field in the patient bore; and

at least one supplemental static field-shaping coil residing between said at least one gradient shield coil and said patient bore enclosure, said at least one supplemental static field-shaping coil being unshielded from said at least one gradient magnetic field and increasing strength of said static magnetic field.

27. (Currently Amended) A system as in claim 26 wherein said at least one ~~gradient shield coil~~ supplemental static field-shaping coil resides external to said at least one gradient coil ~~between said at least one superconducting magnet and said gradient coil assembly~~.